AMENDMENTS TO THE SPECIFICATION

Please amend the following paragraphs:

[0023] A number of spaced electromagnets 136 can be mounted to the substrate 130. In FIG. 1 it is seen that eight equally spaced electromagnets can be provided, which allows the micromirror 104 to have eight different tilted positions. Each position provides a different orientation of the top reflective surface relative to the vertical axis of the pin 124. Thus, when an incident beam ~~140~~ 141 impacts the reflective surface 108 it will be reflected as a reflected beam 146 in a different direction and to a different receiving location, such as a different optical fiber. Thereby, by controlling the actuation of the electromagnets 136 using a control system (not shown) a different optical signal can be sent from a single incident beam.

[0029] FIG. 5 is a cross-sectional view through the micromirror assembly or optical switch which uses the base plate 160 of FIG. 6. It is seen there that a central pin 124 is mounted in the center of the baseplate. The pin 124 is preferably a sapphire pin having a very hard tip. Exemplary support ends can have a hardness greater than Mohs Scale 8. Two of the thin film electromagnets ~~140~~ 143 are shown mounted on the substrate or baseplate in FIG. 5. The baseplate 160 can be a silicon carbide substrate which provides for good heat conductance and a hard impact resistant surface. The micromirror 104 has two layers. The top layer 170 is an ultra low loss glass supermirror, such as is available from Newport Corporation of Irvine, California, and the bottom layer 174 is a magnetic material layer. Around the entire lower edge perimeter of the bottom of the magnetic material layer or at least at the portions which will impact the silicon carbide substrate when the mirror is tilted and/or on the top surface of the silicon carbide substrate which will be impacted by the tilting mirror is a hard tilt stop to provide for high precision and repeatability. The optical switch is shown in two alternative tilted positions in FIG. 5 and the different reflective angles are shown by angle 180, which is 16° to the horizontal, 32° to flip back position.

[0035] An enlarged view of the left portion of an optical switch which does not have the liquid or in which the liquid is not depicted for illustrative purposes is shown in FIG. 10. Referring thereto it is seen that the core material 240 of the electromagnet is sputtered in a trough or indent 250 on the surface of the substrate and the current carrying coils 256 are sputtered on

the top of the core material. In another exemplary embodiment, the electromagent includes a sputtered core and a sputtered winding on the core.